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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,006	08/09/2005	Roger Laurence Cooke	210165.401USPC	9853
500 7590 04/19/2007 SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVE SUITE 5400 SEATTLE, WA 98104			EXAMINER EARLY, MICHAEL JACOBY	
			ART UNIT	PAPER NUMBER
			3744	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/510,006

Applicant(s)

COOKE, ROGER LAURENCE

Examiner

Michael J. Early

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-17, 20-23, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 18, 19, 24-26 and 29-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/9/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

The order in which the claimed limitations are recited is objected to. Typically, an application's claimed limitations are recited in a subsequent manner, such that the first independent claim is sequentially followed by claims that are dependent upon it (i.e., the first independent), which is then followed by a second independent claim and the claims that are dependent it (i.e., the second independent claim), and so on. An example of the aforementioned format is below:

- Independent claim 1
 - Dependent claims (of claim 1)
- Independent claim 2
 - Dependent claims (of claim 2)
- Independent claim Y
 - Dependent claims (of claim Y)
- Independent claim Z
 - Dependent claims (of claim Z)

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5, 8-13, 21, 22, 23, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 3,738,621) in view of Schjolin (US 2,784,568).

Regarding claim 1, Anderson discloses an evaporative cooler (10 – evaporative cooler) having a housing (14 – housing) adapted to be installed along a roof (12 – roof), said housing having an air inlet (22 – entrance port) which is inclined in a manner as to extend substantially perpendicular to the plane of the roof when installed (as seen in Figure 2), one or more evaporative pads (38 – porous pad) mounted in the housing and defining an air-permeable cooling means associated with the inlet (as seen in Figure 2), means for supplying water to the or each pad (see col. 5, lines 17-58; Figure 2), and a fan (60 – fan) for drawing external air into the housing via the air-permeable cooling means (see col. 4, lines 45-47; Figure 2) and for discharging the air thereby cooled via an outlet (30 – exhaust port) of the housing (see col. 4, lines 7-15; Figure 2), wherein the housing is so configured that when along within the roof space the inclined air inlet is closely adjacent the external surface of the roof (as seen in Figure 2).

Anderson does not expressly disclose the housing being installed within a roof space of a pitched roof or of the cooler's inlet being parallel to the plane of the roof.

Schjolin teaches of a cooling apparatus (12 – refrigerant liquefying compartment) enclosed within the rooftop of a vehicle (10) (as seen in Figures 1, 2). Schjolin further discloses that the system is comprised of evaporators (30) and an upward facing air inlet (42 – air inlet grill) that when combined form an air-permeable cooling means and

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also provide means cooling of the interior of the vehicle's passenger compartment (16) (see col. 1, lines 42-57); Figure 1). Further disclosed is that all of the components of the apparatus are located beneath the rooftop and that the rooftop is inclined at an angle (as seen in Figures 1-3). In addition, it is further disclosed that the air inlet is parallel to the plane of the roof (as seen in Figures 1-3).

Regarding claim 1, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the existing apparatus of Anderson by incorporating the cooling device within the rooftop of a vehicle and positioning the device's air inlet in a parallel configuration with the roof, as taught by Schjolin, so to reduce the chances of the apparatus being damaged by foreign objects that may come in contact with the rooftop, thus making the apparatus more reliable and durable.

Regarding claim 2, Anderson as modified by Schjolin disclose the recited limitations above in claim 1.

Regarding claim 3, Anderson as modified by Schjolin disclose the recited limitations above in claims 1 and 2.

Regarding claim 4, Anderson discloses the air-permeable cooling means (30, 42) formed by the pad is substantially planar in form and is mounted within the housing in an inclined configuration so as to lie substantially parallel to the inlet (as seen in Figure 2).

Regarding claim 5, Anderson discloses the water supply means includes spray and/or drip emitters (88 – slots) configured to discharge water onto an upper outwardly-facing surface of the pad (as seen in Figure 2, the slots [88] a positioned above the left-hand side of the porous pad [38] and thus it would have been obvious that the water would have been discharged upon the outwardly-face surface of the pad) defining the air-permeable cooling means (as seen in Figures 2, 4).

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Regarding claim 8, Anderson discloses the means for supplying water to the air-permeable cooling means comprises a reservoir (80, 92 – storage tank, trough) at the base of the housing (as seen in Figure 2), and the base of the housing is so configured that surplus water discharged from the or each pad into the interior of the housing is directed into the reservoir for re-use (see col. 5, lines 17-32; Figure 2).

Regarding claim 9, Anderson as modified by Schjolin discloses the housing has an inclined outer wall (wall in which port [22], louvers [24] and plate [26] are placed upon) in which the inlet is formed (as seen in Figure 2), the outer wall including flashing (28 – integral base) for cooperation with the roof (as seen in Figure 2).

Regarding claim 10, Anderson discloses the flashing is integrally formed within the housing (see col. 4, lines 7-10; Figure 2).

Regarding claim 11, Anderson discloses the flashing includes a rain water diverter (24 – louvers) for diverting water flowing down the roof from above the cooler to substantially prevent such flowing water from flowing into the interior of the housing via the air-permeable cooling means (see col. 3, lines 49-54; Figure 2).

Regarding claim 12, Anderson discloses within the interior of the housing, means for removing water droplets (48, 50 – support frame, splashplates) which may be entrained within the flow of cooled air (see col. 4, lines 36-43; Figure 2).

Regarding claim 13, Anderson discloses the droplet removal means comprises an array of vanes (50 – splashplates) positioned within the flow path of the cooled air (see col. 4, lines 36-43; Figure 2).

Regarding claim 21, Anderson as modified by Schjolin disclose the recited limitations above in claim 1.

Regarding claim 22, Anderson as modified by Schjolin disclose the recited limitations above in claims 1 and 2.

Regarding claim 23, Anderson discloses an evaporative cooler (10 – evaporative cooler) installation mounted adjacent the roof space (volumetric space beneath the vehicle's roof [12]) of a roof (12 – roof) of a building (vehicle; Figure 1), said installation including an evaporative cooler (10 – evaporative cooler) having a cooler housing (14 – outer housing) mounted between rafters of the roof (portion of roof [12] that hole [32] is mounted between; Figure 2), said housing being partially within the roof space (as seen in Figure 2) and carrying a fan (60 – fan) for drawing external air into the housing via one or more evaporative pads (38 – porous pad) defining an air-permeable cooling means (see col. 4, lines 45-47; Figure 2) and for discharging the air thereby cooled via an outlet (30 – exhaust port) from the housing (see col. 4, lines 7-15; Figure 2), and said housing also carrying a water reservoir (80, 92 – storage tank, trough) and a pump (78 – pump) for feeding water from the reservoir to the or each pad (see col. 5, lines 44-46; Figure 2) and forming means for supplying water to the or each pad (see col. 5, lines 17-58; Figure 2).

Anderson does expressly disclose mounting the cooler within the roof space of a pitched roof or of mounting the air-permeable cooling means such that it does not projection beyond the external surface of the roof.

As aforementioned, Schjolin teaches of a cooling apparatus (12 – refrigerant liquefying compartment) enclosed within the rooftop of a vehicle (10) (as seen in Figures 1, 2). Schjolin further discloses that all of the components of the apparatus are located beneath the rooftop and that the rooftop is inclined at an angle (as seen in Figures 1-3).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the existing apparatus of Anderson by incorporating the cooling

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device within the inclined rooftop of an enclosure, as taught by Schjolin, so to reduce the chances of the apparatus being damaged by foreign objects that may come in contact with the rooftop, thus making the apparatus more reliable and durable.

Regarding claim 27, Anderson as modified by Schjolin disclose the recited limitations above in claims 1 and 2.

Regarding claim 28, Anderson as modified by Schjolin disclose a majority of the recited limitations above in claims 1 and 2. Anderson further discloses the cooler housing is comprised of opposed substantially parallel side walls (as seen in Figures 1, 2), the air inlet being positioned at an upper side of the housing (as seen in Figure 2).

Claims 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson as modified by Schjolin as applied to claims 12 and 1 above, and further in view of Dorall (US 3,953,551).

Anderson as modified by Schjolin do not expressly disclose an air permeable pad that is used as a droplet removal means and details related thereto or of a structure that is used to prevent a person from stepping onto the air-permeable means and details related thereto.

Dorall teaches of an evaporative type air cooler that may be mounted upon the roof of a vehicle (see Abstract). Dorall further discloses that a structure (second end wall [34] and a grill) is placed upon the cooler's air inlet (36 – air inlet opening) (see col. 2, lines 58-68) (as seen in Figures 1, 2). Further disclosed is that the cooler's droplet removal means is comprised of an air-permeable pad (26, 26a, 26b – filter) (see col. 3, lines 50-60; col. 4, lines 54-66; Figure 2).

Regarding claim 14, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the existing apparatus of Anderson as

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modified by Schjolin by incorporating an air-permeable droplet removal means, as taught by Dorall, so to provide user's the ability to adjust the humidity of the conditioned air, thus allowing the apparatus more readily meet user's needs (see col. 1, line 67 – col. 2, line 4).

Regarding claim 20, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the existing apparatus of Anderson as modified by Schjolin by incorporating a protective structure upon the surface of the cooler's air inlet, as taught by Dorall, so to provide an addition safeguard for the components enclosed within the cooler's housing, thus providing a means of the extending the apparatus' lifespan.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson as modified by Schjolin as applied to claim 1 above, and further in view of Merideth (US 5,454,538).

Regarding claim 15, Anderson discloses the air-permeable cooling means is mounted to an upper part of the housing including the inlet and the lower part of the housing is comprised of the outlet (as seen in Figure 2).

Anderson as modified by Schjolin do not expressly disclose the housing is comprised of upper and lower parts and the details related to the way they are connected.

Merideth teaches of a cooling device (14 – air conditioner) is mounted via a housing (12 – unit curb apparatus) upon an inclined roof (10) (see col. 1, lines 6-11; col. 2, lines 34-42; Figure 1). Merideth further discloses that the device's housing is comprised of upper (22 – second support member) and lower (20 – first support member) housing parts that are pivotally attached to one another via bolts (80) (see col. 3, line 65 – col. 4, line 2; Figures 1, 4-6). Further disclosed is that the upper housing part may be adjusted relative to the lower housing part prior to mounting the air conditioner upon the unit curb

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apparatus (as seen in Figures 1, 4-6). In addition, Figures 4-6 further illustrate the overlapping relationship throughout the range of movement between the two support members.

Regarding claims 15-17, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the existing apparatus of Anderson as modified by Schjolin by making designing the apparatus so that its housing is comprised of two members that are pivotally attached to one another, as taught by Merideth, so to enable the apparatus to be installed upon roofs that are pitched at various angles, thus reducing the cost associated with uniquely building each apparatus to appropriately mount upon a given roof (see col. 1, lines 20-37).

Allowable Subject Matter

Claims 6, 7, 18, 19, 24-26 and 29-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Early whose telephone number is (571) 272-3681. The examiner can normally be reached on Monday - Friday, 7am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJE
4/16/07


Michael J. Early CHERYL TYLER
Patent Examiner SUPERVISORY PATENT EXAMINER
Art Unit 3744

